Listing of Claims

1. (Previously Cancelled) A shared global word line MRAM structure comprising:

a first bit line conductor oriented in a first direction;

a first sense line conductor oriented in a second direction;

a first memory cell physically connected between the first bit line conductor and the first sense line conductor;

a global word line oriented in substantially the second direction, and magnetically coupled to the first memory cell;

a second bit line conductor oriented in substantially the first direction;

a second sense line conductor oriented in substantially the second direction; and

a second memory cell physically connected between the second bit line conductor and the second sense line conductor;

wherein the global word line is additionally magnetically coupled to the second memory cell.

2. (Previously Cancelled) The shared global word line MRAM structure of claim 1, wherein the first memory cell is a first MRAM device.

3. (Previously Cancelled) The shared global word line MRAM structure of claim 2, wherein a logical state of the first MRAM device is determined by an orientation of magnetization of the first MRAM device.

4. (Previously Cancelled) The shared global word line MRAM structure of claim 3, wherein the orientation of magnetization of the first MRAM device is determined by current conducted by the first bit line and the global word line.

5. (Previously Cancelled) The shared global word line MRAM structure of claim 4, wherein the logical state of the first MRAM device is sensed by the first bit line and the first sense line.

6. (Previously Cancelled) The shared global word line MRAM structure of claim 5, wherein the logical state of the first MRAM device is determined by a sensing a resistance between the first bit line and the first sense line.

7. (Previously Cancelled) The shared global word line MRAM structure of claim 1, wherein the second memory cell is a second MRAM device.

8. (Previously Cancelled) The shared global word line MRAM structure of claim 7, wherein a logical state of the second MRAM device is determined by an orientation of magnetization of the second MRAM device.

9. (Previously Cancelled) The shared global word line MRAM structure of claim 3, wherein the orientation of magnetization of the second MRAM device is determined by current conducted by the second bit line and the global word line.

10. (Previously Cancelled) The shared global word line MRAM structure of claim 4, wherein the logical state of the second MRAM device is sensed by the second bit line and the second sense line.

11. (Previously Cancelled) The shared global word line MRAM structure of claim 5, wherein the logical state of the second MRAM device is determined by a sensing a resistance between the second bit line and the second sense line.

12. (Previously Cancelled) The shared global word line MRAM structure of claim 1, wherein the first bit line, the first sense line conductor and the first memory cell are a mirror image about the global word line of the second bit line, the second sense line conductor and the second memory cell.

13. (Previously Cancelled) The shared global word line MRAM structure of claim 1, wherein the global word line comprises a conductive center and magnetic metal liner,

the global word line providing a bi-directional magnetic field when conducting current, thereby allowing the global word line to orient magnetic states of both the first memory cell and the second memory cell.

14. (Previously Cancelled) The shared global word line MRAM structure of claim 13, wherein the magnetic liner includes a first liner section and a second liner section, the first liner section and the second liner section oriented so that the bi-directional magnetic field is concentrated at locations of both the first memory cell and the second memory cell.

15. (Previously Cancelled) The shared global word line MRAM structure of claim 14, wherein the bi-directional magnetic field flows through the first liner section and the second liner section.

16. (Presently Amended) A method of forming a shared global word line MRAM structure, comprising:

etching a trench in an oxide layer formed over a substrate;

depositing an first liner material;

ansotropically etching the deposited first liner material leaving the first liner material on edges of the trench, and physically contacting a bottom of the trench;

depositing an magnetic metal liner material;

ansotropically etching the deposited magnetic metal liner material leaving the magnetic metal liner material over the first liner material on edges of the trench, so that the magnetic metal liner extends to and physically contacts the bottom of the trench;

depositing a conductive layer; and

chemically, mechanically polishing the conductive layer.

17. (Original) The method of forming a shared global word line MRAM structure of claim 16, wherein the first liner material comprises tantalum.

18. (Presently Amended) The method of forming a shared global word line MRAM structure of claim 16, wherein the magnetic metal liner material comprises at least one of Nickel, Chromium, Cobalt and Iron.

19. (Presently Amended) The method of forming a shared global word line MRAM structure of claim 16, wherein the conductive layer comprises Copper.

20. (Presently Amended) The method of forming a shared global word line MRAM structure of claim 16, wherein the conductive layer is deposited through chemical vapor deposition.

21. (New) The method of forming a shared global word line MRAM structure of claim 16, wherein the substrate comprises a first MRAM array.

22. (New) The method of forming a shared global word line MRAM structure of claim 21, further comprising forming a second MRAM array over the shared global word line.